

COTTON CHATS

FROM

DRAPER COMPANY

SHIPMAN'S COMMON-SENSE BINDER

PATENTED

JANUARY 19, 1892.

APRIL 19, 1904

To open binder, remove the slides from fasteners raise the fasteners to an erect position and then file papers. For punching: lay the papers on covers and mark sheets to correspond with fasteners.

If DUPLICATE is
wanted ORDER

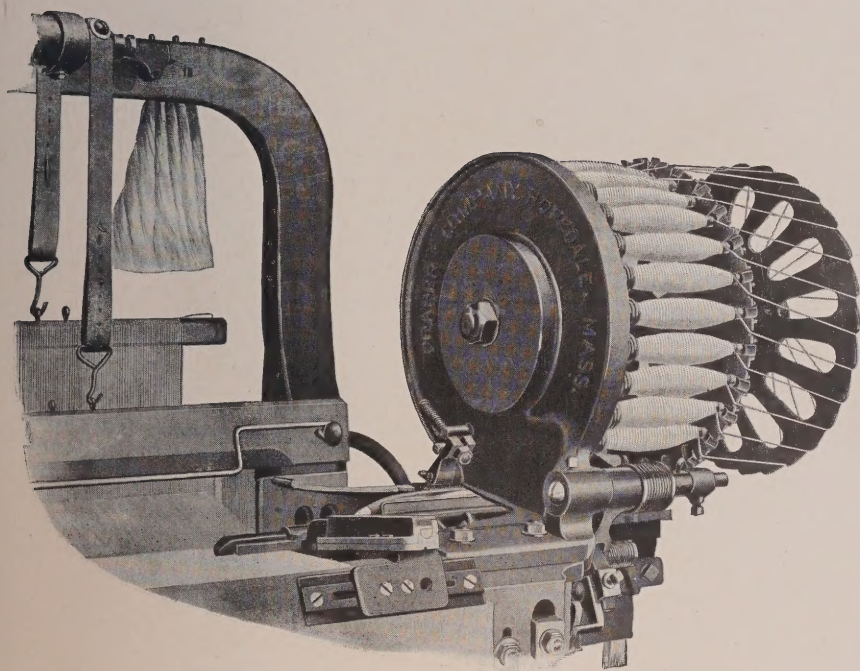
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ASA L. SHIPMAN'S SONS
MANUFACTURERS,
NEW YORK.

COTTON CHATS

By the Secretary of the
DRAPER COMPANY,
HOPEDALE, MASS.

No. 2. AUGUST, 1901.



OUR NEW HOPPER.

While we show illustrations of our new large hopper in our book, recently published, we have other cuts, one of which is shown above, giving another view of the mechanism, and showing its relation to a section of the loom.

These new attachments are giving universal satisfaction and their larger capacity has proved of undoubted advantage.

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JAMES DRAPER.

In our July "Chats" I gave a brief sketch of Ira Draper, the real founder of our present line of industry, and showed how the business, started by him, was transferred on October 9, 1830, to his eldest son, James.

James Draper was born in 1787 and resided in Wayland for the greater portion of his life. His connection with

the introduction of his father's loom improvements lasted until March 6, 1837, when he made a partnership agreement with his half-brother, E. D. Draper, by which the latter assumed active control.

Let it be taken store
and will prosecute the Domestic
mission business in his own name.

JOHN SPRING.

NOTICE TO MANUFACTURERS

DRAPER'S Patent Self-Moving Temples,
are now in operation on all the looms at
Waltham and Lowell, also at various other
Factories, and the Sattinet Factory of Messrs.
Ellis & Son, at Walpole. Any person wishing
to obtain said Temples can examine them at
either of the above named Factories, or at the
Counting Room of Mr. J. A. LOWELL, Oliver
st. Boston.

Price of the Temples, including patent right,
is \$2 a pair. Any person desirous of purchas-
ing may be supplied by the Boston Manufac-
turing Co. at Waltham. For the right to make
them, apply to the subscriber at East Sudbury.
JAMES DRAPER, Patentee.

FIVE THOUSAND SILK WORMS.

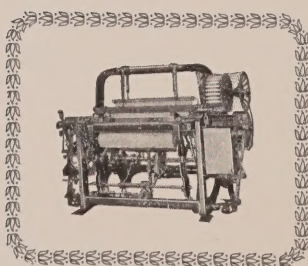
SILK Cocoons, Silk Worms' Eggs, &c may
be seen at No 5 Tremont House.
process of the separation of the
and much more.

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The above is a reprint from the advertising columns of the Boston Daily Evening Transcript, Vol. I—No. 1, issued July 24, 1830.

It is not recorded that James showed any of his father's inventive talent and he evidently had little taste for the business, preferring the line of farming in which he was eminently successful. In early life he was a soldier of the war of 1812, and later became prominent in political and religious activities. He died Dec. 5, 1870, leaving a numerous progeny. Among his living descendants are Charles H. Draper, Cashier of the First National Bank, Boston; Dr. Frank W. Draper, Professor of Legal Medicine for Harvard University and Medical Examiner for Suffolk County; and Wallace S. Draper, Asst. Cashier of the National Shawmut Bank.

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We have had requests at various times, for small electrotypes of the Northrop Loom, to be used in printing letter heads, by overseers of weaving, and for various other purposes. We have a small supply of cuts like that shown, which we will be glad to furnish free to any of our friends who write for them.

SPINDLE STATISTICS.

In our recently published "Textile Texts" on page 16 appears a rough estimate of the spindles in use in various countries at the end of the century. In "Dixie" of June 19 appears a table received from Deputy Consul-General Hammauer of Frankfort, Germany, rendered at a recent meeting of German spinners at Leipzig. A comparison of statistics prepared independently by authorities so widely separated may prove of interest.

	TEXTILE TEXTS.	GERMAN ESTIMATE.	DIFFERENCE.
Great Britain,	46,000,000	45,000,000	1,000,000
United States,	20,000,000	19,300,000	700,000
Germany,	8,000,000	8,000,000	
Russia,	8,000,000	7,500,000	500,000
France,	5,500,000	5,500,000	
Austria,	3,000,000	3,500,000	500,000
Spain,	2,500,000	2,800,000	300,000
*Italy,	2,000,000	200,000	1,800,000
Switzerland,	2,000,000	1,550,000	450,000
Belgium,	1,000,000	1,000,000	
Sweeden, } Holland, } Portugal, } Greece, }	1,000,000	1,000,000	
India,	5,000,000	4,800,000	200,000
Japan,	1,500,000	1,200,000	300,000
China,	500,000	560,000	60,000
	106,000,000	101,910,000	4,090,000

* The German Italian estimate is evidently a misprint, but it is given as received.

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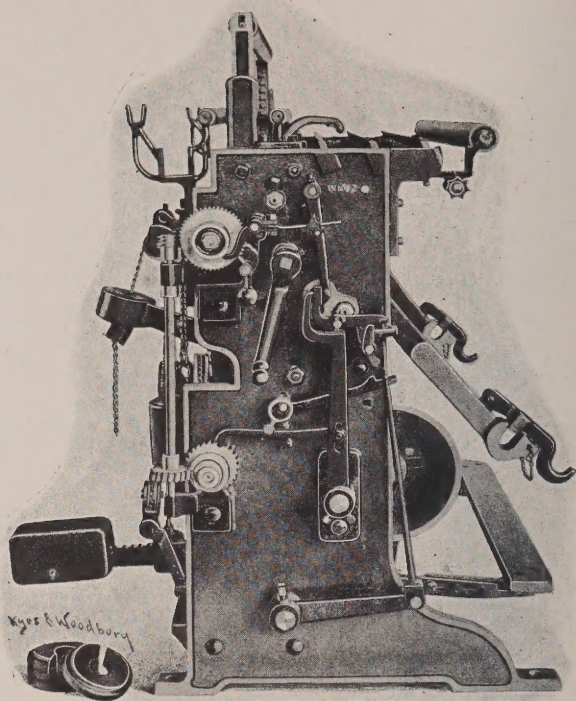
LITIGATION.

During the month of July, the Draper Company presented their evidence in their suit against the American Loom Company of New Jersey (and Readville, Mass.,) claiming infringement of three of their patents by the structures sold by the Defendant and known to the trade as the

HARRIMAN AUTOMATIC LOOM.

In our loom circular of January, 1900, we stated: "*We have never seen attempts at automatic looms in which we could not find good grounds for suit should we deem them of sufficient importance.*"

Also: "*We shall defend our rights in the courts with the obstinacy of conviction, if such methods are necessary.*"



OUR NEW WARPER.

We have recently sent out circulars on a new warper construction of great merit, and suggest that those interested in this line send for copies if they have not already received them.

We are often astonished to note how certain purchasers continue to buy inferior machinery without giving any consideration whatever to new improvements. Our machinery is either better or worse than that in competition. We are always ready to present arguments to show **why** it is **better**. The comparative growth of our business proves that the **majority** listen to us, but we are after the **minority** as well. Perhaps we shall never reach the man who buys for personal reasons rather than for the best interests of his mill, but that type of manager will undoubtedly become extinct in time. We are in business for business on a business basis, ready to deal with all of a similar state of mind. We await your convenience.

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COTTON CHATS

By the Secretary of the
DRAPER COMPANY,
HOPEDALE, MASS.

No. 3. SEPTEMBER, 1901.

E. D. DRAPER.

Continuing down from Ira through James, we next find E. D. Draper associated with the introduction of cotton machinery improvements. E. D. Draper was born June 14, 1813, of a second wife, being therefore a half-brother of James. Like James, he attempted nothing in the line of personal invention, but his business success was sufficient to enable him to devote time and means to practical experiment with social and religious problems. Entering early into cotton manufacture he rose to the position of overseer of weaving at North Uxbridge before starting in the line of temple introduction in 1837. His residence in Uxbridge had brought him into contact with that earnest Christian enthusiast, Adin Ballou, of the near town of Mendon, and in 1842 he was one of several to join in the purchase of a large farming tract on the outskirts of Milford, Mass., where an organization known as the Hopedale Community was founded. This explains how our present Draper Company happens to be located in a quiet country region somewhat apart from the routes of trade. While the religious organization encountered financial difficulties, E. D. Draper prospered by his outside business so that on the dissolution of the Community he and his brother George paid up its debts and took over its assets. In 1868 the attractions of an outside opportunity induced him to change his interests from Hopedale to Boston, investing his entire means in the manufacture of a Fire Proof Safe. The end was financially disastrous, the investment not proving so **safe** as its name might imply, thus illustrating the old adage that the "Shoemaker had better stick to his last."

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When cotton mills are in earnest competition on standard goods, it seems evident that those who can produce at the least expense will not only make the greater profit, but,

by illustrating a profitable method, induce others to use similar equipment until those with higher costs are driven out of that particular line.

It is now well known that Print Cloths for instance, may be produced on Northrop Looms for one half the weaving cost of those made on common looms. The greatest Print Cloth centre in this country, however, has not yet seriously considered their adoption. Print mills are meanwhile built for Northrop looms in other sections, while the older manufacturers adopt systems of curtailment and plan to enter other lines.

Curtailment is practical admission of defeat, for the newer mills run along as before. Change of goods produced often means a change all along the line—change of Machinery, change of Management, change of Selling Agents, change of Customers. The same competitive feature involved in the new loom is still present.

It takes nerve, determination and self-confidence to make a large investment in new machinery; but delay is a serious matter when losses on sales are eating up the very surplus that might be used to stop the waste. Like a plunge into cool water apprehension is soon changed to satisfaction.

The mills that buy Northrop Looms continue to buy more. Of course there are exceptions—but not enough to affect the general proof of satisfaction. Certain peculiar goods need special appliances which are not always perfected in sufficient haste. Certain mill managers were not born with sufficient patience with which to conquer temporary obstacles.

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FIRST COST.

The false shrewdness which thinks to profit by clever discrimination often views the saving made by purchase of cheap machinery as so much clear profit. One hundred dollars saved on a thousand dollar purchase thus seems one hundred dollars left with which to pay dividends. When it becomes necessary, however, to figure the assets, a fair judgment could hardly place full value on machinery discredited by the general trade. In fact it may soon become necessary to replace it for reason of its poor results, thus showing an almost total loss of one thousand dollars. Even if kept running, the added cost of labor, repairs, supplies, etc., may easily defeat the original intention of economy.

It has been shown that average investment returns from Northern Cotton Mills are little over **six per cent.** Any machine that can show **more** than six per cent. of yearly saving on its cost after fair allowance for depreciation is a properly credited purchase, and in choice between competing machines that one which, while more expensive, may even show **no more than six per cent.** advantage **on the difference in cost** is still to be preferred. Those of us who know how difficult it often is to introduce improvements which show ten, twenty, fifty or even **one hundred per cent.** gain, are somewhat comforted by such mathematics, although the process of education by which they are assimilated may be slow.

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SHUTTLE CHANGING LOOMS.

Textile Trade Journals sent here from Europe seem unduly excited over the exhibition of certain shuttle changing looms in England. So far as we may learn from the description sent, the more widely heralded device appears to have the usual upright hopper to hold five or six extra shuttles, the only new feature of note being the fact of the introduction of the new shuttle beneath the shuttle box so that the idea may be used on an over pick loom.

It is well known that shuttle changing looms have been exploited in England at many different times during the last fifty years, and it is more than probable that the necessary element of construction which has heretofore prevented success, is not fully attained by the mere substitution of an over pick for an under pick loom.

It is clearly in evidence that we are the only concern that has ever **successfully** introduced filling changing looms, and when we say **success**, we do not intend to allow reference to attempts at sale of certain automatic looms, in which small lots are tried in various mills with trained mechanics standing over them, the **whole number** in use after a year or more of effort not equalling that sometimes shipped from our works as a week's production.

We ourselves have tested various forms of shuttle changing looms, and fully realize their weak points. There are certain fundamental objections which must invariably prevent results equal to those of **looms that change the filling in the shuttle.** The use of a large number of shuttles in one loom requires an element of allowable variation in the pick that has heretofore been insurmountable. The

mere fact of changing the shuttle does not relieve the weaver from the former labor of taking out the empty bobbin or cop tube, inserting new supplies and threading the shuttle, with the various motions of handling the same. There are also certain mechanical difficulties involved in the substitution of the new shuttle owing to its curious shape.

The supply of reserve shuttles is also too limited. Our present hoppers carry reserve supplies equivalent to **25** shuttles, our former reserve of 15 having proved insufficient for best results.

If the English manufacturers insist, however, on repeating experience, the results of which are already on record, no one can well deny them the privilege.

We have at no time been so bare of orders that we could give much serious consideration to the question of whether they **would** or **would not** adopt the Northrop loom. They must come to it in time or go out of business, as the question of a **substitute** is not pertinent. **There is no substitute.**

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NEWLY ACQUIRED RIGHTS.

On July 20th and 23rd, we acquired by direct assignments, twenty-three (23) granted patents, formerly owned by William H. Baker, Frederick E. Kip, and Malcolm G. Chace, together with agreements to assign applications for patents now pending, and patents possibly applied for in future, covering a large field of filling changing devices for automatic looms, including various electrical connections and special adaptation of mechanisms for special problems in weaving.

While fully assured that the several hundred patents to which these are now added would of themselves prevent the competition of successful filling changing looms, so large an increase to our patent property certainly gives greater security and continued confidence. Patent competition can only be removed by **Purchase** or **Litigation**. We have used both methods in the past, and shall undoubtedly continue to apply them in the future. We intend to make it as difficult as possible for anyone to attempt division of profits by sale of mechanism in the development of which **we were the original pioneers**, and for which **we took all the necessary preliminary risks**.

We caution the trade against infringement of the Baker and Kip and Chace patents referred to, and to avoid confusion will state that this purchase does **not** include patents of Baker and Kip relative to Warp-Stop devices.



No. 4. OCTOBER, 1901.

GEORGE DRAPER.

While allowing due credit to Ira, James and E. D. Draper, it is essentially fitting that we allot to George the real merit of firmly establishing our present successful industry. George Draper was not content to merely sell another's idea, but he contributed from his own brains, combined with outside talent, and associated with either purpose so vigorous and persistent an individuality as to force success under adverse as well as favorable circumstances.

George Draper was born in Weston, Mass., Aug. 16, 1817, and died June 7, 1887. He was continually associated with the cotton industry from the age of fourteen. He started as operative at North Uxbridge, under his elder brother; became Manager at the Union Mill, Walpole; left to become Overseer of Weaving at Three Rivers; and then made his first attempt at introduction of cotton machinery improvements. His temple invention had already brought a profit of some \$50,000 to other parties, but this latter venture not being associated with so fortunate an idea, proved disastrous; in fact, it left him in debt and obliged to take a position as operative in the Massachusetts Mills, Lowell, where for two years his pay never rose higher than \$1.25 per day. This was during the later years of the panic of 1837, which necessarily aggravated the conditions. He then left to take charge of the fancy weaving at the Harris Company, Woonsocket, and later went as Superintendent of a mill for the Otis Company, at Ware. He then again attempted the introduction of machinery improvements for a year, with better success, but returned to the Otis Company, having been offered the Superintendency of all of their mills.

In 1852 he formed a partnership with his elder brother, E. D. Draper, and moved to Hopedale in 1853. His history

from that time is the history of the industries now united, and lack of space denies us the chance for further detail. On retirement of his brother, E. D. Draper, in 1868, his eldest son, General Wm. F. Draper, came into partnership, and the more important of the notable cotton machinery improvements, with the exception of the Dutcher Temple, such as the Sawyer Spindle, Carroll Ring, etc., started after that time. In the various sub-companies at Hopedale, George Draper was always the largest stockholder, and it is largely due to his persistent efforts that the present Draper Company, representing a combination of the various organizations, found the necessary properties awaiting the purpose.



In some former biographical sketches, an erroneous statement has appeared, to the effect that George Draper took out over one hundred patents. This is true enough, if read as including patents of other inventors, but, remembering the strict views with regard to accurate statements held by our predecessor, it is well to state that his personally patented inventions number exactly forty-two. The growth of our business has led to specialization, which allows certain of our present inventors to have time enough in which to exceed that figure, but the greater part of George Draper's time and effort was spent in the struggle of **introduction**, rather than **construction**.

George Draper was one of the earlier pioneers in the line of introducing a direct personality into trade advertising. Some of his terse sayings have never been equalled for the fitness of their application. We quote a few:

"Now, it is inevitable that a party having an inferior article to sell must, in order to dispose of it, sell cheaper or tell more lies about it. They make up their minds they might as well 'die for an old sheep as a lamb.' While persistent falsehood is a power, it will not make a spindle run any lighter or steadier, or last any longer."

"Others are trying to come as near as they can by making it appear that something which they can furnish at less price is about as good; perhaps, in an emergency, some of them, to make a sale, will assert it is better."

An interesting type of aggressive advertisement occurred during the earlier part of the history of the Sawyer Spindle, as follows:

“BUY THE BEST.
 THE HARMONY MILLS
 Have not ordered.....Spindles.
 They have not ordered.....Spindles.
 They have ordered

24,000 **More.**

Sawyer Spindles.

GEORGE DRAPER & SON,
 Hopedale, Mass., Feb. 15, 1875.”

This brought out a similar product by a competitor,
 printed directly underneath, stating:

“BUY THE BEST.
 THE SHOVE MILLS,
 of Fall River, Mass.
 Have not ordered Spindles.
 They have not ordered.....Spindles.
 They have not ordered.....Spindles.
 They have ordered 15,360 Rabbeth Spindles.
 { ditto, mentioning further orders. }
 { ditto, mentioning further orders. }

These are all Bona Fide Orders.

We fully guarantee the Rabbeth Spindles against the
 pretended claims of George Draper.”

(This guarantee had to be made good later.)

It is, of course, well known that a consolidation of in-
 terests later brought these two spindles under one manage-
 ment.

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WARP=STOP MOTION INFRINGEMENT.

On November 21st, 1899, there issued to Joseph Cold-
 well and Christopher Giles Gildard, of Fall River, Mass., a
 patent, No. 637,234, covering certain elements of a warp-
 stop mechanism. Among the ideas shown, but not claimed
 in this patent, was that of **suspending the detectors from
 single warp threads**, so that each thread is normally out
 of contact with the detectors suspended from the adjacent
 threads. Several competing manufacturers have used this
 construction in warp-stop motions sold to the trade in
 general.

On July 30th, 1901, there issued a **Re-issue** of the
 above patent, No. 11,923, in which the above mentioned
 special feature is made the subject matter of **twelve addi-**

tional claims, thus rendering infringers liable for damages. On September 6, 1901, we acquired by license, the sole and exclusive right to make, use and sell mechanical warp-stop motions containing any inventions patented in and by said reissued letters patent, for and during the term of said reissued patent, and are authorized and empowered to bring suit in the name of the Patentees against any persons who shall infringe said reissued letters patent by making, using or selling mechanical warp-stop motions containing any invention patented thereby.

We hereby warn the trade in general against infringement, for we shall resort to legal protection of our property rights, if not respected.

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LITIGATION.

In our suit against the American Loom Company of Readville, builders of the Harriman Loom, during September, our expert, Mr. Arthur S. Browne, was briefly cross-examined by counsel for the defendant, Wm. A. Jenner, Esq.

While the examination seemingly failed to disclose any flaw in our armor, it brought out a bit of repartee which might well be preserved.

Mr. Jenner, after some question relating to the reciprocating temple on the loom quoted Lord Eldon's remark:

"Where every season is summer and every place a temple."

Mr. Brown retorted to the effect that: *"While every place might not be a temple, our temples were in every place."*

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LOOM CONSTRUCTION.

It often happens that changes so slight as to escape attention, are often of high purport. We have lately decided to change the relation of our loom pitman bearing at the lay end with relation to the crank centre, in order to get that precise element of eccentric movement which will allow more time for shuttle flight, and yet not produce a jerky movement. These experiments were suggested by Mr. Robert Burgess, agent of the Grinnell Corporation, New Bedford, and the tests have been made on looms made for him and tried in his mill.



No. 5. NOVEMBER, 1901.

WARREN W. DUTCHER.

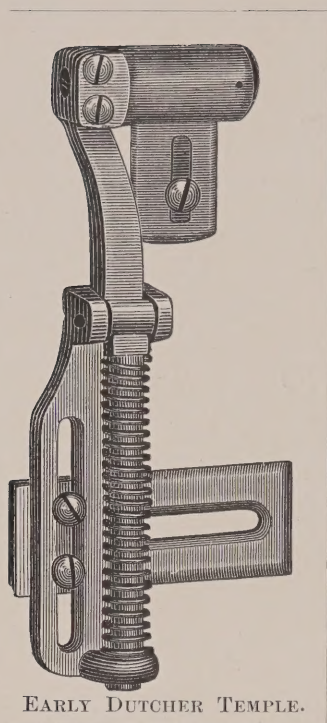
In collecting information as to the relative effect of those now deceased, on the present Hopedale industry, it is truly pertinent to refer to one not joined by tie of relationship to the Draper family, but intimately associated with all the early growth of their business development.

While Ira Draper invented the first rotary temple, and while George Draper continued its control by improvements, a new competitor appeared in the field soon after 1850, which seemed well designed to lower the Draper prestige.

Elihu C. Dutcher, born Nov. 9, 1802, and his brother Warren W. Dutcher, born July 4, 1812, together invented and patented the original Dutcher Temple. E. D. and G. Draper purchased the half-interest of Elihu in 1854 and persuaded W. W. Dutcher to remove his home to Hopedale in 1856. Elihu purchased a farm in Wisconsin with the proceeds of his sale, but died of cholera the second day after his arrival there. His brother lived among us until his death in January, 1880.

Warren W. Dutcher was an extremely ingenious inventor, taking out twenty patents, mainly on temples and machines by which to manufacture them. His machines for setting temple teeth are practically unequalled in the line of automatic mechanism and several of his ideas were never patented, but used under lock and key in order to prolong the monopoly of use beyond the seventeen years granted under patent rights.

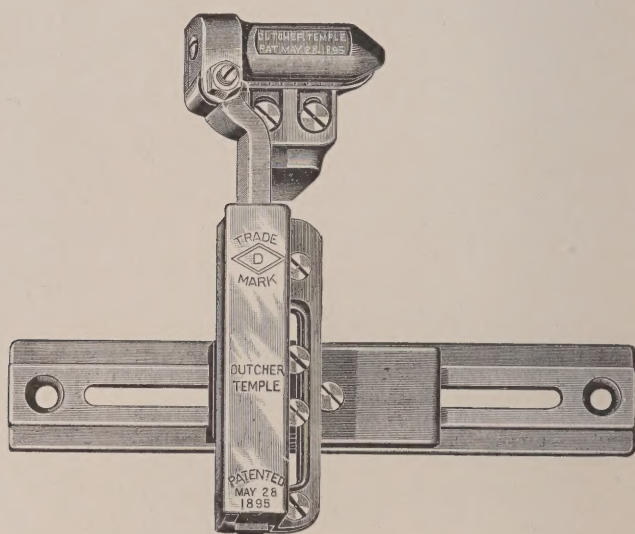
Mr. Dutcher was also intimately associated with our foundry department, originally a separate corporation. He became a large stockholder in various Hopedale companies, and his family continues the interest. His son, Frank J. Dutcher, has been continually associated with us also and now holds the position of assistant agent and director of the Draper Company.



EARLY DUTCHER TEMPLE.

It is certainly a tribute to the founders of the temple industry that the business, originating with them, still furnishes the entire demand in this line. So far as we are aware, no temples are manufactured in this country outside our Hopedale works.

Comparison of these two illustrations not only illustrates mechanical progress, but also the advance in engraving and electrotyping. The same general character of the device is preserved, but the details show notable modification.



RECENT DUTCHER TEMPLE.

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NORTHROP LOOMS IN JAPAN.

Mr. Hachiro H. Fukuhara of Tokio, presented a most able paper at the meeting of the New England Cotton Manufacturers' Association at Niagara Falls, Sept. 25. In it he gives the total number of spindles for Japan in 1900, as 1,407,968, including twister spindles, which is fairly near my formerly printed rough estimate of 1,500,000. He states regarding looms:—

ever from us. The skill and adaptability of this ingenious people may well arouse investigation and admiration, and a loom which can "*give satisfaction in every respect*," under such circumstances, is equally worthy attention and favorable comment.

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CHEAP RINGS.

We recently obtained possession of a quantity of new rings sold by a small competitor at lower price than our regular list. We could not understand how it could be possible for any one, even if equipped with our own complete plant, to sell **good** rings at a profit on any such basis. We therefore turned the lot over to our superintendent, who gave them to our regular inspectors with the following result:

41% were thrown out as needing **repair** by reason of **defective tool work**.

25% were thrown out as **needing re-polishing**.

14% were found **soft** and therefore **worthless** for continued use.

2% were **poor** for various reasons.

18% were passed as good, although not nearly so good as our own average.

All were untrue as to roundness, the variation being as high as .017 in diameter.

It is now easily seen how cheap rings can be sold cheaply. We might lower our own price materially **should we dispense with our present rigid inspection**, which will not allow a noted imperfection to pass. We might hazard a shrewd guess in supposing that rings like those tested above **were not inspected at all**. When one stops to consider that it costs more to inspect a ring, and stand the loss that comes through inspection than it does to make the ring up **to** the point of inspection, the explanation of low prices is manifest.

We have the best and largest plant for making spinning rings.

We manufacture the largest quantity and have been continuously at the business for over thirty years.

We can make cheap rings if any one can.

But:

We will not cheapen them by **neglect** or **lessening the processes** which now operate to their advantage.



